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FIG. 5. Irregular forms of the clavate bodies containing oilglobules.

FIG. 6. Basidia with sterigmata and spores (highly magnified).

FIG. 7. Basidiospores.

Contribution to the Lichens of Maine.--I.

BY F. L. HARVEY.

The following list embraces lichens from Maine collected by the Rev. Joseph Blake and found in the Blake Herbarium of the Maine State College, together with species noticed about Orono by the writer, and a few species recorded from Maine in Tuckerman's North American Lichens.

The list includes all the species known by the writer to have been published from the State. No personal efforts have been made to collect these neglected forms beyond what was needed for class work, hence the list from Orono and other parts of the State is far from exhaustive.

Miss Cummings has collected quite extensively during the past season in Aroostook Co., and we understand has detected quite a large number of interesting forms that will swell the State list. The lichens in the Blake Herbarium were largely collected from thirty to forty years ago, those from Mt. Ktaadn bearing date of July 4, 1856. Mr. Blake's correspondence shows that probably all his specimens were determined by Tuckerman. The specimens have withstood the ravages of time much better than the names have the criticisms of systematists.

The synonymy has presented some knotty problems, which we trust have been correctly solved. The modern names only have been given in the list. We desire to acknowledge our indebtedness to Miss Clara E. Cummings for professional courtesies. We would be pleased to correspond with all who have collected lichens or other Cryptogams in Maine, looking toward a catalogue of the Cryptogams of the State. In listing the species we have followed the sequence adopted in Tuckerman's "Genera Lichenum."

Tribe I.—Parmeliacei.

FAM. I.—USNEEL.

1. *Ramalina calacaris canaliculata* Fr. On trees, common. Me. (Blake); Orono (Harvey).

2. *R. pusilla* (Prev.). On trees. (Tuckerm. N. A. Lich. i. 26.) On trees, Me. (Tuckerman).
3. *Cetraria Islandica* (L.) Ach. On ground, common. Mt. Ktaadn (Blake); Orono (Harvey).
4. *C. cucullata* (Bell) Ach. On earth. Mt. Ktaadn (Blake).
5. *C. nivalis* (L.) Ach. Mt. Ktaadn (Blake).
6. *C. Fahlunensis* (L.) Schaer. Mt. Ktaadn (Blake).
7. *C. ciliaris* Ach. On trees and rails. N. Yarmouth (Blake); Orono (Harvey).
8. *C. lacunosa* Ach. Mt. Ktaadn (Blake).
9. *Evernia prunastri* (L.) Ach. On rails, Me. (Blake); Orono (Harvey).
10. *Usnea barbata* (L.) Fr. Type.
11. *Usnea barbata florida* Fr. Cumberland (Blake); Orono (Harvey).
12. *Usnea barbata hirta* Fr. Cumberland (Blake); Orono (Harvey).
13. *Usnea barbata serotina* Fr. Cumberland (Blake); Orono (Harvey).
14. *Usnea barbata dasypoda* Fr. Cumberland (Blake); Orono (Harvey).
15. *Usnea barbata plicata* Fr. Cumberland (Blake); Orono (Harvey).
16. *U. longissima* Ach. On spruce trees. Greenfield (Harvey).
17. *Alectoria jubata chalybeiformis* Ach. On rails. Cumberland (Blake); Orono.

FAM. 2.—PARMELIEI.

18. *Theloschistes parietinus* (L.) Norm. On stones. Common. Wells (Blake); Orono (Harvey).
19. *T. concolor* (Dicks.) Cumberland (Blake).
20. *Parmelia perlata* (L.) Ach. On stones. Common. Cumberland (Blake); Orono (Harvey).
21. *P. tiliacea* (Hoffm.) Floerk. Trees and rocks. Cumberland (Blake); Orono (Harvey).
22. *P. saxatilis* (L.) Fr. Wells (Blake); Orono (Harvey).
23. *P. physodes* (L.) Ach. Saco (Blake); Orono (Harvey).
24. *P. colpodes* (Ach.) Nyl.; Orono (Harvey).
25. *P. olivacea* (L.) Ach. Common. Mt. Ktaadn (Blake); Orono (Harvey).
26. *P. olivacea sorediata* (Ach.) Nyl. Mt. Ktaadn (Blake). In Blake's Herb. as *P. dendritica* Nyl.
27. *P. stygia* (L.) Ach. Mt. Ktaadn (Blake).
28. *P. caperata* (L.) Ach. Trunks and stones. Wells (Blake); Orono (Harvey).
29. *P. conspersa* (Ehrh.) Ach. Rocks and stones. Cumberland (Blake); Orono (Harvey).
30. *P. centrifuga* (L.) Ach. Mt. Ktaadn (Blake); Mt. Desert (Tuckerm. N. A. Lichens, i. 65).
31. *P. incurva* (Pers.) Fr. Mt. Desert (Tuckerm. N. A. Lichens, i. 65).
32. *Physcia speciosa* (Wulf. Ach.) Nyl. On rocks. Wells (Blake).
33. *P. stellaris* (L.) On apple trees and poplar. Wells (Blake).

FAM. 3.—UMBILICARIEI.

34. *Umbilicaria proboscidea* (L.) Stenh. Alpine rocks. Mt. Ktaadn (Blake).
35. *U. polyphylla* (L.) Hoffm. Mt. Desert (Tuckerm. N. A. Lich. i. 85).
36. *U. flocculosa* Hoffm. Mt. Desert (Tuckerm. N. A. Lich. i. 85).
37. *U. hyperborea* Hoffm. Mt. Ktaadn (Blake).

- 38. *U. erosa* (Web.) Hoffm. Mt. Ktaadn (Blake).
- 39. *U. Muhlenbergii* (Ach.) Tuckerm. Cumberland (Blake).
- 40. *U. Dillenii* Tuckerm. Harrison (Blake); Searsport (Black).
- 41. *U. pustulata* (L.) Hoffm. Rocks. Cumberland (Blake).

FAM. 4.—PELTIGERI.

- 42. *Sticta amplisema* (Scop.) Mass. Trees. Cumberland (Blake); Orono (Harvey).
- 43. *S. herbacea* (Huds.) Ach. Cumberland (Blake); Orono (Harvey).
- 44. *S. pulmonaria* (L.) Ach. Common on trees. Cumberland (Blake); Orono (Harvey).
- 45. *S. crocata* (L.) Ach. Cumberland (Blake).
- 46. *Nephroma tomentosum* (Hoffm.) Kœrb. Harrison (Blake).
- 47. *N. Helveticum* Ach. N. Bridgton (Blake).
- 48. *N. laevigatum* Ach. Harrison (Blake).
- 49. *Petigera apthosa* (L.) Hoffm. Harrison (Blake); Orono (Harvey).
- 50. *P. horizontalis* (L.) Hoffm. Ground on moss. Cumberland (Blake); Orono (Harvey).
- 51. *P. polydactyla* (Neck.) Hoffm. Harrison and Mt. Ktaadn (Blake); Orono (Harvey).
- 52. *P. scuta* (Dicks.) Leight. N. Bridgton (Blake).

FAM. 5.—PANNARIEI.

- 53. *Pannaria granitina* (Sommerf.) Maine (Willey). (Tuck. N. A. Lich. I. 118.)
- 54. *P. plumbea* (Lightf.) Delis. Mt. Desert (Tuckerman N. A. Lich. I. 124).

FAM. 6.—COLLEMEI.

- 55. *Collema nigrescens* (Huds.) Ach. Harrison (Blake).
- 56. *Leptogium tremelloides* (L. f.) Fr. Harrison (Blake).
- 57. *L. chloromelum* (Sw.) Nyl. Maine (Blake).
- 58. *L. Burgessii* (Lightf.) Mont. Maine (Oakes). (Tuck. N. A. Lich. I. 165).
- 59. *L. myochroum saturninum* Schaer. Harrison (Blake).

FAM. 7.—LECANOREI.

- 60. *Placodium eleganz* (Link) DC. On rocks. Wells (Blake).
- 61. *P. microphyllum* Tuckerm. On old fences. Orono (Harvey).
- 62. *P. cerinum* (Hedw.) Næg. & Hepp. On rails, common. Me. (Blake); Orono (Harvey).
- 63. *P. ferrugineum discolor* Willey. Mt. Desert (Tuckerman). (Tuckerm. N. A. Lich. I. 177.)
- 64. *P. vitellinum* (Ehrh.) Næg. & Hepp. Dead wood. Cumberland (Blake).
- 65. *Lecanora pallida* (Schreb.) Schaer. On beach trees. Wells (Blake); Orono (Harvey).
- 66. *L. subfusca distans* Ach. On trees and dead wood. Wells (Blake); Orono (Harvey).
- 67. *L. varia* (Ehrh.) Nyl. Harrison (Blake).
- 68. *L. tartarea* (L.) Ach. On rocks. Harrison (Blake).
- 69. *L. molybdina microcyclos* Wahl. (Tuckerm. N. A. Lich. I. 201.)

70. *Pertusaria velata* (Turn.) Nyl. Cumberland (Blake).
 71. *P. multipunctata* (Turn.) Nyl. On yellow birch, with other Maine specimens, but not labeled (Blake).
 72. *P. communis* D.C. In Blake's Herb. as *P. pertusa* Ach. No locality; but with Maine specimens (Blake).
 73. *P. Wulfenii* D.C. Cumberland (Blake).
 74. *Conotrema urceolatum* (Ach.) Tuckerm. In Blake's Herb. with Maine specimens, without locality. Orono (Harvey).

Tribe II.—Lecideacei.

FAM. I.—CLADONIEL.

75. *Stereocaulon coralloides* Fr. Mt. Ktaadn (Blake).
 76. *S. paschale* (L.) Fr. Mt. Ktaadn. Cumberland (Blake); Orono (Harvey).
 77. *S. tomentosum* (Fr.) Th. Fr. On ground. Cumberland (Blake); Orono (Harvey).
 78. *S. pileatum* Ach. Maine (Willey). (Tuckerm. N. A. Lich. I. 233.)
 79. *Cladonia pyxidata* (L.) Fr. On ground. Cumberland (Blake); Orono (Harvey).
 80. *C. gracilis* (L.) Nyl. Type. Cumberland (Blake).
 81. *C. gracilis verticillata* Fr. Mt. Ktaadn (Blake).
 82. *C. gracilis cervicornis* Flörk. North Bridgton (Blake).
 83. *C. gracilis hybrida* Schær. Orono (Harvey).
 84. *C. gracilis elongata* Fr. Maine (Willey). (Tuck. N. A. Lich. I. 243); Orono (Harvey).
 85. *C. turgida* (Ehrh.) Hoffm. On ground. Cumberland and Wells (Blake).
 86. *C. squamosa* Hoffm. Mt. Ktaadn (Blake).
 87. *C. squamosa furcata* Fr. Mt. Ktaadn (Blake).
 88. *C. furcata crispata* Fl. Cumberland (Blake).
 89. *C. furcata subulata* Fl. Mt. Ktaadn (Blake).
 90. *C. rangiferina* (L.) Hoffm. Cumberland (Blake); Orono (Harvey).
 91. *C. rangiferina sylvatica* L. Wells (Blake); Orono (Harvey).
 92. *C. rangiferina alpestris* L. Mt. Ktaadn (Blake); Orono (Harvey).
 93. *C. amaurocrea* (Fl.) Schær. Mt. Ktaadn (Blake); Holden (C. F. Dole).
 94. *C. uncialis* (L.) Fr. Cumberland (Blake).
 95. *C. uncialis adunca* Wells (Blake).
 96. *C. Boryi* Tuckerm. Wells (Blake).
 97. *C. cornucopioides* (L.) Fr. Mt. Ktaadn. Cumberland (Blake); Orono (Harvey).
 98. *C. bellidiiflora* (Ach.) Schær. Wells (Blake).
 99. *C. macilenta* (Ehrh.) Hoffm. Specimens named *C. Flærkiana* Fr. from Cumberland are in the Blake Herbarium, but probably should be referred to the above.
 100. *C. cristatalla* Tuckerm. Wells (Blake); Orono (Harvey).

FAM. 3.—LECIDEEL.

101. *Baomyces roseus* Pers. Common. Orono.
 102. *Biatora ostreata* (Hoffm.) Fr. Mt. Desert (Willey). (Tuck. N. A. Lich. 2. 14.)

103. *B. coarctata* (Sm. Nyl.) Maine (Willey). (Tuck. N. A. Lich. 2. 15.)
 104. *B. vernalis* (L.) Fr. Harrison (Blake).
 105. *B. sanguino-atra* (Fr.) Tuckerm. Harrison (Blake). A specimen from Mt. Ktaadn named *Lecidea sanguinaria* Ach. seems to be referable to the above.
 106. *B. carnulenta* Tuckerm. Maine (Willey). (Tuck. N. A. Lich. 2. 23.)
 107. *Lecidea contigua* Fr. Mt. Ktaadn (Blake).
 108. *Buellia parasema* (Ach.) Th. Fr. Orono (Harvey).
 109. *B. Ederi* (Ach.) Br. & Rostr. Coast of Maine (Tuckerm.). (Tuck. N. A. Lich. 2. 102.)
 110. *B. geographica* (L.) Tuck. Coast of Maine (Tuckerm.). (Tuck. N. A. Lich. 2. 103.)

Tribe III.—Graphidacei.

FAM. 1.—XYLOGRAPHEI.

111. *Xylographa parallela* Nyl. Maine (Pringle). (Tuck. N. A. Lich. 2. 112.)
 112. *X. disseminata* Willey. Mt. Desert (Willey). (Tuck. N. A. Lich. 2. 112.)
 113. *X. opgraphella* Nyl. Maine (Tuckerm.). (Tuck. N. A. Lich. 2. 113.)

FAM. 3.—OPEGRAPHEI.

114. *Graphis scripta* (L.) Ach. Cumberland (Blake); Orono (Harvey).

Tribe IV.—Caliciacei.

FAM. 1.—SPHÆROPHOREI.

115. *Sphærophorus fragilis* (L.) Pers. Mt. Ktaadn (Blake).

Lichens new to North America.

BY JOHN W. ECKFELDT.

During the past few years I have had under examination numerous collections of Lichens from all portions of North America, and among them quite a notable number have proven to be new. Many of these have been submitted to the kind observation of Drs. Nylander and Muller, and I have to thank them for the determinations. Not wishing to burden them with too much material from our country, I herewith submit the following paper on some noteworthy species.

PANNARIA APPLANATA n. sp.

Thallus squamulose, more or less irregularly lobulate, the divisions at the border cut-crenate, flat, quite closely adnate to the substrata; the centre sparsely granulose, pale olivaceous or a rusty yellow. Hypothallus showing in distinct patches and of a paler color. Apothecia scattered, rounded and elevated with a